

PHOSPHOR BLENDS FOR GENERATING WHITE LIGHT FROM NEAR-UV/BLEU LIGHT-EMITTING DEVICES

Abstract of Disclosure

Phosphor blends are disclosed that are capable of absorbing electromagnetic radiation having wavelengths in the range from about 315 nm to about 480 nm. These blends are mixtures of phosphors selected from the group consisting of $\text{Sr}_2\text{P}_2\text{O}_7:\text{Eu}^{2+}, \text{Mn}^{2+}$, $(\text{Ca}, \text{Sr}, \text{Ba})_a(\text{PO}_4)_3(\text{F}, \text{Cl}, \text{OH}):\text{Eu}^{2+}, \text{Mn}^{2+}$, wherein a is in a range from about 4.5 to and including 5, $3.5\text{MgO} \cdot 0.5\text{MgF}_2\text{GeO}_2:\text{Mn}^{4+}$, $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}$, $(\text{Sr}, \text{Ba}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{OH}):\text{Eu}^{2+}$, $(\text{Ba}, \text{Ca}, \text{Sr})_2\text{MgAl}_{16}\text{O}_{27}:\text{Eu}^{2+}$, and $(\text{Ba}, \text{Ca}, \text{Sr})_2\text{MgAl}_{16}\text{O}_{27}:\text{Eu}^{2+}, \text{Mn}^{2+}$. White light sources are obtained by applying a phosphor blend over at least one LED that is capable of emitting electromagnetic radiation in the above-noted wavelength range.